

REMARKS

Claims 1-7 and 30-37 are active in this application.

Claims 30-37 find support in original Claims 1-7 and the specification as originally filed.

Claims 1-7 and 30-37 are drawn to the elected subject matter.

The claim objections noted on page 3 of the Action are no longer applicable.

No new matter is believed to have been added.

The rejection of Claims 1-3 under 35 USC 101 is addressed by amendment as the term “natural” is not present. Further, the inclusion of the phrase “isolated” means that the subject matter of the claim is not that in nature but isolated from nature (see MPEP 2105).

Withdrawal of the rejection is requested.

The rejection of Claims 1-3 under 112, second paragraph is no longer applicable as the phrases referenced on page 5 of the Action have been removed.

The rejections of Claims 1-3 under 112, first paragraph relating to written description and enablement are respectfully traversed.

The application describes and enables (1) SEQ ID NO:10, (2) SEQ ID NO:10 with the amino acid at position 16 and the amino acid at position 23 represent independently or simultaneously, a cysteine or a serine; (3) a peptide which has at least 60% similarity with SEQ ID NO : 10 and which has conserved an antimicrobial activity as well as the other features of the claims presented herein.

As discussed on page 2, lines 25-29, the invention is to peptides with antimicrobial activity and then further in lines 29-31 the peptides have bateriostatic activity. Antimicrobial activity is measured against plant pathogens (e.g., bacteria) as shown in Example 4 but not against plant cells (e.g., protoplasts) and the cytotoxic activity is measured against plant cells (protoplasts) as shown in Example 5 but not against the plant pathogens. Antimicrobial and

cytotoxic activity are distinct meaning that peptides exhibiting no cytotoxic activity against plant cells can exhibit antimicrobial activity.

Therefore as discussed on page 7, lines 18-23 peptides can have reduced or no cytotoxic activity but have conserved antimicrobial activity and such peptides are what is claimed. For example, Pep25aa and Pep2S as discussed in the specification on page 7, lines 12-28 are such peptides and fall within the scope of what is claimed.

There is no question that peptides of SEQ ID NO:10 with the amino acid at position 16 and the amino acid at position 23 represent independently or simultaneously, a cysteine or a serine are described. (see the Sequence Listing, page 6, page 7 for examples; see also Pep1S).

As to those peptide which have at least 60% similarity with SEQ ID NO : 10 and which has conserved an antimicrobial activity, this is described on page 5, lines 16-21 and page 5, line 23 to page 6, line 13. Further the specification on pages 3-4 provides a series of species supporting the genus of peptides covered by this phrase. Thus, claim 3 is described. Claim 3 is enabled as Example 4 (discussed above) teaches a test to assess antimicrobial activity.

There also seems to be some confusion as to what the specification describes noting the Examiner's statements on page 6 relating to Pep25aa and Pep2S having cytotoxic activities and Pep1S not having cytotoxic activity. Pep1S is SEQ ID NO:10 wherein R1 is Cys and R2 is Ser have reduced cytotoxic activity but having conserved antimicrobial. In other words, as discussed above a reduction in cytotoxic activity is not necessarily equated with antimicrobial.

In view of the above, the specification does describe and enable what is claimed as presented herein.

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Withdrawal of both rejections is requested.

A Notice of Allowance for all pending claims is requested.

Respectfully submitted,

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